6JU6

Beam Power Tube

NOVAR TYPE

For Horizontal-Deflection-Amplifier Service in Low-B+, Black-and-White TV Receivers

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage (AC or DC)	E_h	6.3	V
Heater Current.	I_h	1.600	A
Direct Interelectrode Capacitances			
Without external shield			
Grid No.1 to plate.	c_{g1-p}	1.2	pF
Input: G1 to (K, G3, G2, H).	c_i	22	pF
Output: P to (K, G3, G2, H).	c_o	9.0	pF

For the following characteristics, see Conditions

Amplification Factor.	μ	-	-	4.7	-	
Triode connection[a]						
Plate Resistance (Approx.). .	r_p	-	-	-	18	kΩ
Transconductance.	g_m	-	-	-	7000	μmhos
DC Plate Current.	I_b	-	470[b]	-	45	mA
DC Grid-No.2 Current.	I_{c2}	-	32[b]	-	1.5	mA
Cutoff DC Grid-No.1 Voltage .	$E_{c1(co)}$	-75	-	-	-32	V
Plate mA = 1						

Conditions

Heater Voltage.	E_h	Bogey value				V
Peak Positive-Pulse Plate Voltage[c]	e_{bm}	6500	-	-	-	V
DC Plate Voltage.	E_b	-	50	125	130	V
Grid No.3	Connected to cathode at socket					
DC Grid-No.2 Voltage.	E_{c2}	125	125	125	125	V
DC Grid-No.1 Voltage.	E_{c1}	-	0	-20	-20	V

MECHANICAL CHARACTERISTICS

Operating Position. . . . . Any
Type of Cathode . . . . Coated Unipotential
Maximum Overall Length. . . . . 3.550 in
Maximum Seated Length . . . . 3.170 in
Maximum Diameter. 1.562 in
Dimensional Outline . . . . See *General Section*
Envelope. . . . . JEDEC T12
Top Cap . . . . .Skirted Miniature (JEDEC C1-2 or C1-3)
Bases (alternates)
Large-Button Novar 9-Pin (JEDEC E9-76)
Large-Button Novar 9-Pin with Exhaust Tip (JEDEC E9-88)

TERMINAL DIAGRAM (Bottom View)

Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Grid No.2
Pin 8 - Grid No.3
Pin 9 - Do Not Use
Top Cap - Plate

9QL

DESIGN-MAXIMUM RATINGS

For operation as a Horizontal-Deflection-Amplifier Tube in a 525-line, 30-frame system

DC Plate Supply Voltage	E_{bb}	770	V
Peak Positive-Pulse Plate Voltage[d]	e_{bm}	6500	V
Peak Negative-Pulse Plate Voltage	$-e_{bm}$	1500	V
DC Grid-No.3 Voltage[e]	E_{c3}	75	V
DC Grid-No.2 (Screen-Grid) Voltage	E_{c2}	220	V
DC Grid-No.1 (Control-Grid) Voltage Negative-bias value	$-E_{c1}$	55	V
Peak Negative-Pulse Grid-No.1 Voltage	$-e_{c1m}$	330	V
Heater-Cathode Voltage			
Peak	e_{hkm}	±200	V
Average	$E_{hk(av)}$	100	V
Heater Voltage (AC or DC)	E_h	5.7 to 6.9	V
Cathode Current			
Peak	i_{km}	950	mA
Average	$I_{k(av)}$	275	mA
Grid-No.2 Input	P_{g2}	3.5	W
Plate Dissipation[f]	P_b	17	W
Envelope Temperature At hottest point on envelope surface	T_E	240	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance	$R_{g1}(ckt)$		
For grid-No.1-resistor-bias operation	-	0.47	MΩ
For plate-pulsed operation (horizontal-deflection circuits only)	-	10	MΩ

[a] With grid No.2 connected to plate at socket.

[b] This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.

[c] Under pulse-duration condition specified in Footnote d.

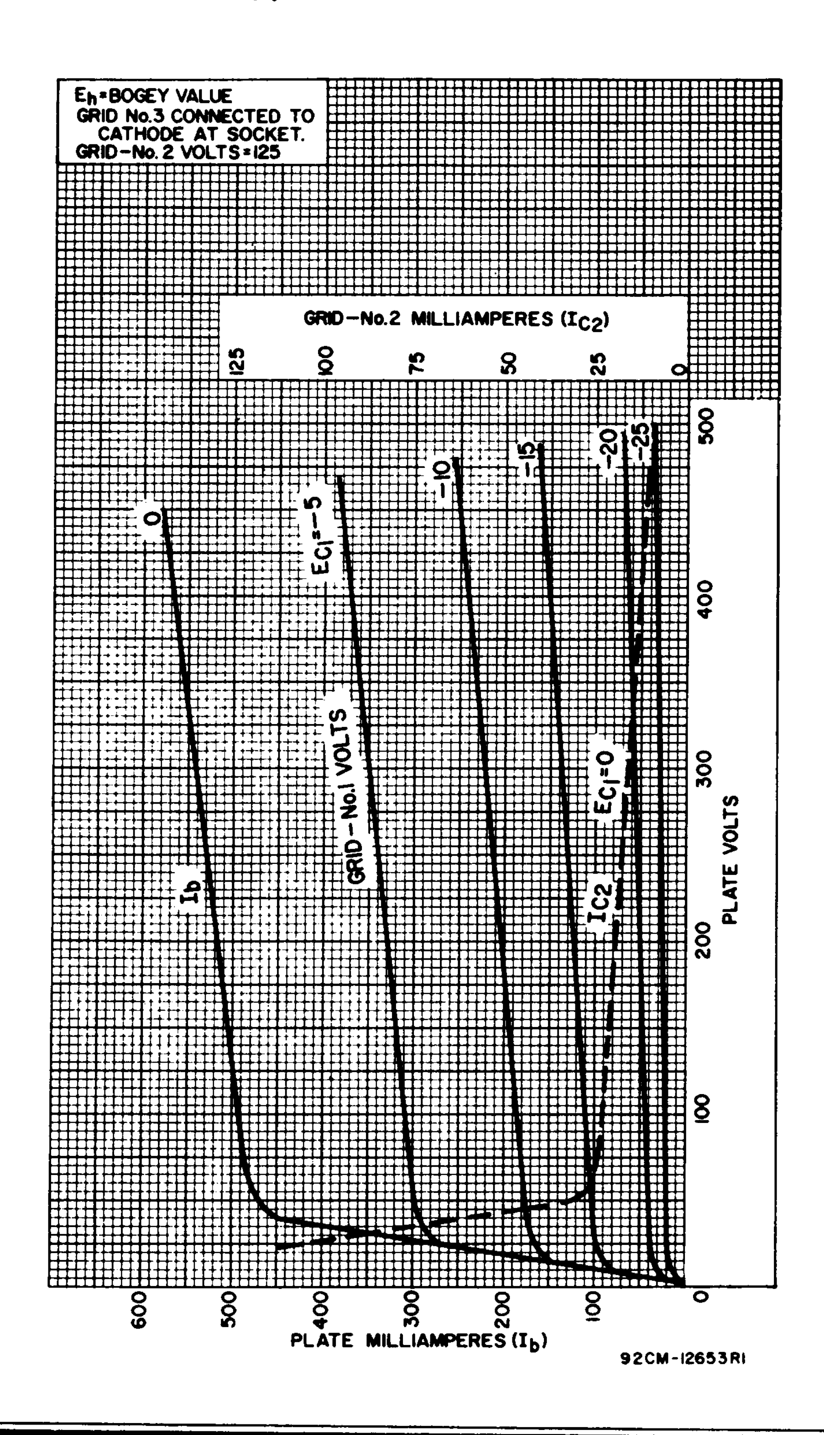
[d] This rating is applicable where the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 μs.

[e] In horizontal-deflection-amplifier service, a positive voltage may be applied to grid No.3 to reduce interference from "snivets" which may occur in both vhf and uhf television receivers. A typical operating value for this voltage is 30 V.

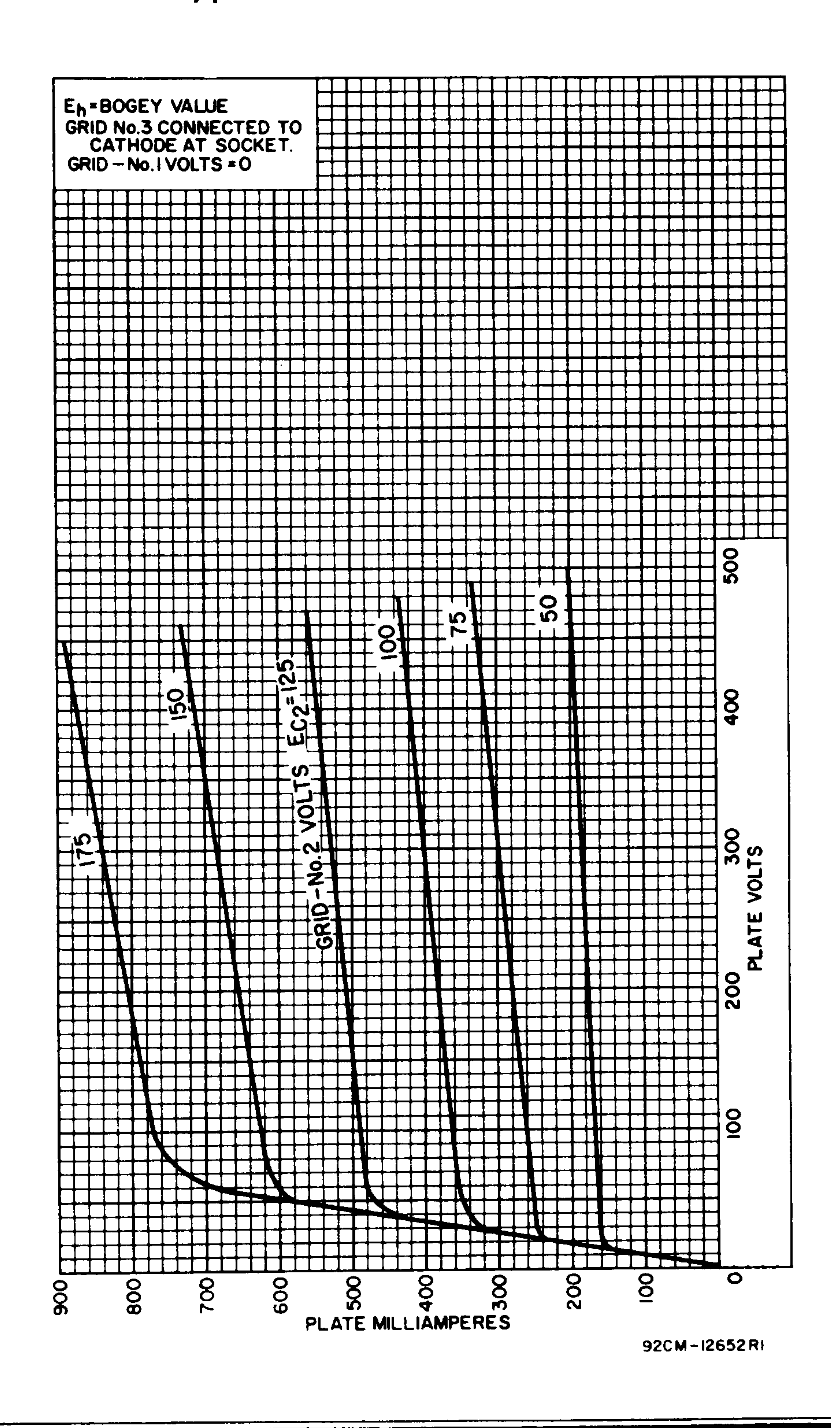
[f] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

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Typical Characteristics



Typical Plate Characteristics



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